Discussion Guide

ARIN XXVI Draft Policies and the PDP

https://www.arin.net/ARIN-XXVI/

Welcome

Policies in the ARIN region are developed by the Internet community using the open and transparent process described in the ARIN Policy Development Process (PDP). The Internet community develops policies via discussion on the ARIN Public Policy Mail List (PPML) and at the ARIN Public Policy Meetings. Anyone may participate in the process – ARIN membership is not required.

The ARIN Board of Trustees adopts draft policies recommended to it by the ARIN Advisory Council if the Board determines that the PDP has been followed, that support and consensus for a policy has been reached among the community, and if the draft policies are consistent with ARIN's Articles of Incorporation and Bylaws and with the applicable laws and regulations.

The ARIN Public Policy Meeting is conducted in an orderly manner to understand the sense of the majority, to respect the views of the minority, and to protect the interests of those absent. Accordingly, the flow of the meeting is structured according to a published agenda and participants are expected to follow Meeting Courtesies and the Rules of Discussion.

Meeting Courtesies

All participants are requested to:

1. Either mute or turn off all communications devices such as cell phones, PDAs, and pagers.
2. Mute the audio output of their computers and other electronic devices.
3. Listen to the speakers and not engage in activities that are unrelated to the draft policy being discussed, such as processing e-mail.

Draft Policy Discussion Structure

Policy development is facilitated by the use of a structured process at the Public Policy Meeting. The steps in this process are:

1. Draft Policy Introduction: The history of the draft policy, including the date of introduction, the date of designation as a draft policy, and any previous considerations is presented. The presentation also identifies the ARIN Advisory Council members who are shepherds of the draft policy. In addition, ARIN staff and legal assessments are given.

2. Presentation: A member of the ARIN Advisory Council (or the petitioner) presents the draft policy.

3. Discussion: Discussion of the draft policy is conducted using the Rules of Discussion.

ARIN XXVI DISCUSSION GUIDE

For Discussion

This document contains the draft policies on the ARIN XXVI agenda. The text of the draft policies in this document is up to date through 7 October 2010.

Included at the end of this document is a copy of ARIN's Policy Development Process (PDP).

The entire Internet community is invited and encouraged to participate in these policy discussions. Your active participation in these discussions is vital to the process and will help to form policies that are beneficial to all.

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Draft Policy 2010-8: Rework of IPv6 assignment criteria

https://www.arin.net/policy/proposals/2010_8.html

Advisory Council Shepherds: **David Farmer and Scott Leibrand**

14 September 2010

Summary:

Changes IPv6 assignment policy

1. Need determined by total site count (sites get /48 or larger blocks)

2. ARIN to assign a prefix (on nibble boundary) to meet total organization need plus growth. [ARIN will assign /48, /44, /40, etc.]

3. Subsequent assignments based on 75% site count (not individual site utilization): For example: organization with 5 sites, one of which qualified for a /47, got a /44 (16 /48s). When organization grows to 13 /48s, they may apply for extending their prefix to a /40.

4. Encourages aggregation

Policy Statement:

[Replace section 6.5.8 as follows;

6.5.8. Direct assignments from ARIN to end-user organizations]

6.5.8.1 Initial Assignment Criteria

Organizations may justify an initial assignment for addressing devices directly attached to their own network infrastructure, with an intent for the addresses to begin operational use within 12 months, by meeting one of the following criteria:

a. Having a previously justified IPv4 end-user assignment from ARIN or one of its predecessor registries, or;

b. Currently being IPv6 Multihomed or immediately becoming IPv6 Multihomed and using an assigned valid global AS number, or;

c. By having a network consisting of a total of 1000 or more hosts, or;

d. By providing a reasonable technical justification indicating why IPv6 addresses from an ISP or other LIR are unsuitable.

Examples of justifications for why addresses from an ISP or other LIR may be unsuitable include, but are not limited to:

- An organization that operates infrastructure critical to life safety or the functioning of society can justify the need for an assignment based on the fact that renumbering would have a broader than expected impact than simply the number of hosts directly involved. These would include: hospitals, fire fighting, police, emergency response, power or energy distribution, water or waste treatment, traffic management and control, etc…

- Regardless of the number of hosts directly involved, an organization can justify the need for an assignment if renumbering would affect 1000 or more individuals either internal or external to the organization.

- An organization with a network not connected to the Internet can justify the need for an assignment by documenting a need for guaranteed uniqueness, beyond the statistical uniqueness provided by ULA (see RFC 4193).

- An organization with a network not connected to the Internet, such as a VPN overlay network, can justify the need for an assignment if they require authoritative delegation of reverse DNS.This policy also should dramatically increase the completion rate for transfer requests, as the evaluation of whether space is efficiently utilized after the transfer can occur in parallel, completely independently of the transfer request, and can continue even if the transfer request is abandoned.

The bulleted lists of acceptable documentation removed from the NRPM should be maintained by ARIN elsewhere on the website, such as at https://www.arin.net/resources/request/transfers.html

6.5.8.2 Initial assignment size

Organizations that meet at least one of the initial assignment criteria above are eligible to receive an initial assignment of /48. Requests for larger initial assignments, reasonably justified with supporting documentation, will be evaluated based on the number of sites in an organization's network and the number of subnets needed to support any extra-large sites defined below.

6.5.8.2.1 /48 per site

An organization may request up to a /48 for each site in its network, including any sites that will be operational within 12 months. Where a site is a discrete location that is part of an organization's network. In the case of a multi-tenant building, each organization located at the site may separately justify a /48 for its network at the site.

A campus with multiple buildings may be considered as one or multiple sites, based on the implementation of its network infrastructure. For a campus to be considered as multiple sites, reasonable technical documentation must be submitted describing how the network infrastructure is implemented in a manner equivalent to multiple sites.

6.5.8.2.2 Extra-large site

In rare cases, an organization may request more than a /48 for an extra-large site which requires more than 16,384 /64 subnets. In such a case, a detailed subnet plan must be submitted for each extra-large site in an organization's network. An extra-large site will receive the smallest prefix such that the total subnet utilization justified does not exceed 25%. Each extra-large site will be counted as an equivalent number of /48 sites.

6.5.8.2.3 Larger initial assignments

Larger initial assignments will be determined based on the number

of sites justified above, aligned on a nibble boundary using the following table:

More than 1 but less than or equal to 12 sites justified, receives a /44 assignment;

More than 12 but less than or equal to 192 /sites justified, receives a /40 assignment;

More than 192 but less than or equal to 3,072 sites justified, receives a /36 assignment;

More than 3,072 sites justified, receives a /32 assignment or larger.

In cases where more than 3,072 sites are justified, an assignment of the smallest prefix, aligned on a nibble boundary, will be made such that the total utilization based on the number of sites justified above does not exceed 75%.

6.5.8.3 Subsequent assignments

Requests for subsequent assignments with supporting documentation will be evaluated based on the same criteria as an initial assignment under 6.5.8.2 with the following modifications:

a. A subsequent assignment is justified when the total utilization based on the number of sites justified exceeds 75% across all of an organization's assignments. Except, if the organization received an assignment per section 6.11 IPv6 Multiple Discrete Networks, such assignments will be evaluated as if it were to a separate organization. Organizations may have multiple separate assignments that should be considered in total, due to previous subsequent assignments made per clause 6.5.8.3.c below, or through Mergers and Acquisitions in section 8.2.

b. When possible subsequent assignments will result it the expansion of an existing assignment by one or more nibble boundaries as justified.

c. If it is not possible to expand an existing assignment, or to expand it adequately to meet the justified need, then a separate new assignment will be made of a size as justified.

6.5.8.4 Consolidation and return of separate assignments

Organizations with multiple separate assignments should consolidate into a single aggregate, if feasible. If an organization stops using one or more of its separate assignments, any unused assignments must be returned to ARIN.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- \> 12 sites must be assigned a /40 (when less could suffice) - fee schedule increases at /40.
- Inconsistency between assignments and allocations, and, use of percentages and HD ratio.

ARIN General Counsel
This proposal poses no significant legal issues.

Resource Impact: Minimal

Draft Policy 2010-9: IPv6 for 6rd

https://www.arin.net/policy/proposals/2010_9.html

Advisory Council Shepherds: **Marla Azinger and Heather Schiller**

24 September 2010

Summary:

Allows an ISP with IPv4 space to request an IPv6 allocation for a 6rd deployment.

Policy Statement:

6rd is an incremental method for Service Providers to deploy IPv6, defined in the IETF Standards Track RFC 5969. If you have IPv4 addresses then you automatically qualify for IPv6 space for 6rd. Upon receipt of a 6rd request, an appropriate additional IPv6 allocation will be made that supports 6rd to be counted as a separate & parallel deployment to IPv4 and native IPv6. There is no requirement to segregate address space requested under this policy from regular IPv6 Allocation Supernets. From a management perspective this address space is to be treated as regular IPv6 address space.

While it is possible for an operator to transition to native IPv6 within the same address space used by 6rd, some operators may wish to keep native IPv6 users separate from 6rd users to permit optimization of aggregation. If an operator chooses to renumber users to an address space outside the 6rd aggregate when transitioning them to native IPv6, the 6rd allocation may be returned to ARIN when it is no longer in use.

It is suggested that contiguous allocations be made to any prior existing ones in the event justification for more IPv6 address space exists when the organization transitions 6rd out of their network.

Justification for use of IPv6 for 6rd will be reviewed after the first 3 years and reclaimed if it is not in use. After the first 3 years, any additional reviews will follow regular IPv6 policy. Requester will be exempt from returning all or a portion of the address space when 6rd is no longer used if they can show justification for need of the 6rd address space for other existing IPv6 addressing requirements be it native IPv6 or some other IPv6 network technology.

Rationale:

6rd is an incremental method for Service Providers to deploy IPv6, defined in the IETF Standards Track RFC 5969. 6rd has been used successfully by a number of service providers to deploy IPv6 based on automatic IPv6 prefix delegation and tunneling over existing IPv4 infrastructure. The chief advantage of this approach is that it deploys the service quickly while enabling the network administration to manage its deployment outlays, and ensures the correspondence between IPv4 and IPv6 routing. 6rd is distinct from other transition technologies such as 6to4 and Teredo in that it operates within the confines of a service provider network, allowing it to be managed by the service provider. 6rd is designed to be transparent to both the user and the rest of the Internet at large.

To allow automatic prefix delegation to sites and stateless tunneling, 6rd utilizes a mapping scheme between an operator's IPv6 allocation and IPv4 address space. With a /32 allocation and non-contiguous IPv4 addressing plan, IPv6 deployment with 6rd is possible, but generally results in no more than a /64 to a subscriber site. A /28 allows the operator to delegate prefixes shorter than /64, allowing multiple /64 subnets within the home. When IPv4 addresses are known to be contiguous for the lifetime of the 6rd deployment, mechanisms exist for a more efficient mapping. This is most likely if the operator has deployed IPv4 NAPT technology within their network, and are addressing homes within a contiguous block of RFC 1918 space (e.g., 10/8).

This example shows how the 6rd prefix is created based on a /28 IPv6 prefix using one of several non-contiguous global address ranges. This is a more realistic scenario of service providers in North America deploying IPv6 with 6rd today:

> SP IPv6 prefix: 2001:0DB0::/28
>
> v4suffix-length: 32 (unable to exclude common bits due to non-contiguous IPv4 allocations)
>
> 6rd CE router IPv4 address: 192.0.2.1
>
> 6rd site IPv6 prefix: 2001:0DBC:0000:2010::/60

This example shows how the 6rd prefix is created based on a /32 IPv6 prefix using RFC1918 address space from 10.0.0.0/8. This example assumes the operator is facing IPv4 scarcity to the point it has deployed or is planning to deploy a layer of NAPT ("Carrier Grade NAT") within the service provider network and addressed its subscribers with private addresses accordingly:

> SP IPv6 prefix: 2001:0DB8::/32
>
> v4suffix-length: 24 (from 10/8, first octet (10) is excluded from the encoding)
>
> 6rd CE router IPv4 address: 10.100.100.1
>
> 6rd site IPv6 prefix: 2001:0DB8:6464:0100::/56

Justifications: Examples of how to display home networks using multiple subnets is accomplished by providing a network plan that involves the use of routing opposed to bridging. Such plans may involve the reduction of NAT, next-gen services, media types, separate L2 domains and more. The plan must simply show how the end user environment is not a single LAN subscriber.

Supporting Research: 6rd is responsible for the largest production Ipv6 deployment today, supporting 4.5 million subscribers in France within a /26 that was granted by RIPE. This ISP previously had a /32, and went back and to RIPE for an additional /26. At least one other provider has deployed 6rd within a /27 that was granted recently for 6rd. A /24 was recently granted as well, likely for 6rd deployment. There are multiple providers in North America and around the world that have committed to delivering residential broadband service with 6rd, or are doing so today.

The following RIPE report shows the affect 6rd has had in France, which accounts for the largest deployment in all of Europe or North America.

http://labs.ripe.net/Members/emileaben/content-measuring-ipv6-web-clients-and-caching-resolvers-part-2-country-level-and-other-statistics

"In Figure 2 (Western Europe), we see a native IPv6 client capability in France of over 4%. This is mainly caused by free.fr that accounts for 70% of the native IPv6 clients measured. Note that technically free.fr uses 6rd-tunneling, but externally that looks, feels and smells like native IPv6"This policy also should dramatically increase the completion rate for transfer requests, as the evaluation of whether space is efficiently utilized after the transfer can occur in parallel, completely independently of the transfer request, and can continue even if the transfer request is abandoned.

The bulleted lists of acceptable documentation removed from the NRPM should be maintained by ARIN elsewhere on the website, such as at https://www.arin.net/resources/request/transfers.html

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

Reassignments of /64s to customers will qualify an ISP for a /32. If ISPs want to make larger reassignments to customers they can qualify for increasingly larger allocations with no other qualifying criteria required. For example, an ISP that wants to assign /48s to customers will automatically qualify for a /16.

ARIN General Counsel

No comments at this time. It is unlikely to raise legal issues.

Resource Impact: Minimal

Draft Policy 2010-10 (Global Proposal): Global Policy for IPv4 Allocations by the IANA Post Exhaustion

https://www.arin.net/policy/proposals/2010_10.html

Advisory Council Shepherds: **Bill Darte and Owen DeLong**

20 September 2010

Summary:

This policy establishes an IANA reclamation pool of IPv4 address space. This pool will be comprised of any "eligible" IPv4 address space returned to IANA. Once the pool is activated, the two existing IPv4 Global policies (NRPM policies 10.1 and 10.4) will be formally retired. RIRs may request addresses from this pool upon exhaustion of their IPv4 inventory, as defined in the policy. The policy further requires IANA to do weekly reporting on the address pool. The policy prohibits any transfers of the address space issued from the reclamation pool.

Policy Statement:

1. Reclamation Pool Upon adoption of this IPv4 address policy by the ICANN Board of Directors, the IANA shall establish a Reclamation Pool to be utilized post RIR IPv4 exhaustion as defined in Section 4. The reclamation pool will initially contain any fragments that may be left over in IANA inventory. As soon as the first RIR exhausts its inventory of IP address space, this Reclamation Pool will be declared active. When the Reclamation Pool is declared active, the Global Policy for the Allocation of the Remaining IPv4 Address Space[3] and Policy for Allocation of IPv4 Blocks to Regional Internet Registries[4] will be formally deprecated.

2. Returning Address Space to the IANA The IANA will accept into the Reclamation Pool all eligible IPv4 address space that are offered for return. Eligible address space includes addresses that are not designated as "special use" by an IETF RFC or addresses allocated to RIR's unless they are being returned by the RIR that they were orignally allocated to. Legacy address holders may return address space directly to the IANA if they so choose.

3. Address Allocations from the Reclamation Pool by the IANA Allocations from the Reclamation Pool may begin once the pool is declared active. Addresses in the Reclamation Pool must be allocated on a CIDR boundary. Allocations from the Reclamation Pool are subject to a minimum allocation unit equal to the minimum allocation unit of all RIRs and a maximum allocation unit of one /8. The Reclamation Pool will be divided on CIDR boundaries and distributed evenly to all eligible RIRs once each quarter. Any remainder not evenly divisible by the number of eligible RIRs will remain in the Reclamation Pool until such time sufficient address returns allow another round of allocations.

4. RIR Eligibility for Receiving Allocations from the Reclamation Pool Upon the exhaustion of an RIR's free space pool and after receiving their final /8 from the IANA[3], an RIR will become eligible to request address space from the IANA Reclamation Pool when it publicly announces via its respective global announcements email list and by posting a notice on its website that it has exhausted its supply of IPv4 address space. Exhaustion is defined as an inventory of less than the equivalent of a single /8 and the inability to further assign address space to its customers in units equal to or shorter than the longest of any RIR's policy defined minimum allocation unit. Up to one /10 or equivalent of IPv4 address space specifically reserved for any special purpose by an RIR will not be counted against that RIR when determining eligibility unless that space was received from the IANA reclamation pool. Any RIR that is formed after the ICANN Board of Directors has ratified this policy is not eligible to utilize this policy to obtain IPv4 address space from the IANA.

5. Reporting Requirements The IANA shall publish on at least a weekly basis a report that is publicly available which at a minimum details all address space that has been received and that has been allocated. The IANA shall publish a Returned Address Space Report which indicates what resources were returned, by whom and when. The IANA shall publish an Allocations Report on at least a weekly basis which at a minimum indicates what IPv4 address space has been allocated, which RIR received the allocation and when. The IANA shall publish a public notice confirming RIR eligibility subsequent to Section 4.

6. No Transfer Rights Address space assigned from the Reclamation Pool may be transferred if there is either an ICANN Board ratified global policy or globally coordinated RIR policy specifically written to deal with transfers whether inter-RIR or from one entity to another. Transfers must meet the requirements of such a policy. In the absence of such a policy, no transfers of any kind related to address space allocated or assigned from the reclamation pool is allowed.

Rationale:

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- *The proposal defines RIR exhaustion as "an inventory of less than the equivalent of a single /8 and the inability to further assign address space to its customers in units equal to or shorter than the longest of the RIR's policy defined minimum allocation unit." For clarification, staff interprets this definition to mean that exhaustion occurs at the point when ARIN has less than a /8 and no /24s (per policy 2010-2) available to issue.*

ARIN General Counsel
No comments at this time.

Resource Impact: Minimal

Draft Policy 2010-11: Required Resource Reviews

https://www.arin.net/policy/proposals/2010_11.html

Advisory Council Shepherds: **Marc Crandall and Bill Darte**

20 July 2010

Summary:

This draft policy establishes new criteria to enact NRPM 12 resource reviews. It requires ARIN staff to initiate resource reviews when M&A activity occurs but IP addresses are not transferred to the acquirer; when fraud or abuse is reported to ARIN, either about a specific IP address range or about an OrgID; when any NRPM 8.3 transfer occurs; or when staff are reviewing an additional IP address request and find that more than a quarter of an OrgID's downstream SWIPs are covered under the Residential Customer Privacy policy.

Policy Statement:

[Replace the text "under sections 4-6" in section 12, paragraph 7 with "under paragraphs 12.4 through 12.6"]

Add to section 12 the following text:

10. Except as provided below, resource reviews are conducted at the discretion of the ARIN staff. In any of the circumstances mentioned below, a resource review must be initiated by ARIN staff:

   a. Report or discovery of an acquisition, merger, transfer, trade or sale in which the infrastructure and customer base of a network move from one organization to another organization, but, the applicable IP resources are not transferred. In this case, the organization retaining the IP resources must be reviewed. The organization receiving the customers may also be reviewed at the discretion of the ARIN staff.

   b. Upon receipt by ARIN of one or more credible reports of fraud or abuse of an IP address block. Abuse shall be defined as use of the block in violation of the RSA or other ARIN policies and shall not extend to include general reports of host conduct which are not within ARIN's scope.

   c. In the case where an organization wishes to act as recipient of resources pursuant to a transfer under section 8.3, unless otherwise prohibited by paragraph 12.2(c).

   d. An organization which submits a request for additional resources when more than 25% of their existing resources are obscured in SWIP or RWHOIS pursuant to section 4.2.3.7.6 (residential customer privacy).

   e. Other than as specified in 12.10(c), paragraph 12.2(c) does not exempt organizations from the reviews required under section 12.10.

Rationale:

The first change is a minor correction which improves clarity and consistency of the original policy without changing the meaning.

The addition of 12.10 (a) through (e) serves to create a set of circumstances under which a resource review is required, rather than optional and entirely at ARIN staff discretion.

The majority of early comments on this proposal focused on 12.10 (e). Mostly it was confusion about the exact ramifications. This section will cause ARIN to maintain greater scrutiny only in cases where a given ISP issues more than 25% of their total space to residential customers who wish to remain anonymous and receive network blocks of /29 or larger. To the best of my knowledge, there are not currently any ISPs which meet this criteria. Additionally, it would only apply that scrutiny to IPv4, and will not carry forward into IPv6 residential assignments.

This policy should improve the compliance verification of ARIN policies and may result in the improved reclamation of under-utilized IP address space. It should also serve as a deterrent to certain address hoarding tactics which have come to light in recent history.

Timetable for implementation: Immediately upon ratification by the Board

STAFF ASSESSMENT

ARIN Staff Comments

This proposal could cause ARIN staff to conduct resource reviews on a more frequent basis. Any prescription for prioritizing such reviews could delay other important registration activities from being processed in a timely manner.

ARIN General Counsel
Pending.

Resource Impact
This policy would have moderate resource impact. It is estimated that implementation would occur within 6 months after ratification by the ARIN Board of Trustees. The following would be needed in order to implement:
- Resource reviews, audits, and fraud research require many man-hours. These new requirements to conduct audits on a much more regular basis could necessitate hiring and training additional registration staff.
- Changes to current business practices
- Staff training
- Updated guidelines

Draft Policy 2010-12: IPv6 Subsequent Allocation

https://www.arin.net/policy/proposals/2010_12.html

Advisory Council Shepherds: **Marla Azinger and Heather Schiller**

20 July 2010

Summary:

This policy opens the IPv6 ISP additional allocation policy to allow for subsequent allocations to be considered when a new technology is being implemented which requires a separate block from existing IPv6 allocations. Subsequent allocations issued under this new language must be reviewed with the registrant every 3 years by ARIN staff.

Policy Statement:

Modify 6.5.2.1 Subsequent allocation criteria. ADD the following sentence: Subsequent allocations will also be considered for transitional technologies that cannot be accommodated by, nor were accounted for, under the initial allocation.

Justification for the subsequent subnet size will be based on the plan and technology provided. Justification for these allocations will be reviewed every 3 years and reclaimed if it is not in use. Requester will be exempt from returning all or a portion of the address space if they can show justification for need of this allocation for other existing IPv6 addressing requirements be it Native V6 or some other V6 network technology.

Rationale:

Current organizations cannot get an allocation for a IPv6 transitional technology if they have already received their initial allocation of IPv6. The reason they cannot get an additional IPV6 allocation is because they don't meet the HD ratio for a subsequent allocation and they don't want to use their initial assignment because it is insufficient, mapped out for other long term plans, or already has portions in use.

An alternative proposal to permit more allocations was submitted that supported 6rd but since then community members have come forward with concern that this should support not just one particular technology but any that enable v6 deployment.

Justification Example: Below is an example of how the details for a technology and its subnet requirements could be provided as justification. This example is based of 6rd.

6rd is intended to be an incremental method for deploying IPv6 and bridge the gap for End Users to the IPv6 Internet. The method provides a native dual-stack service to a subscriber site by leveraging existing infrastructure. If an entity already has a /32 of IPv6 they can not use the same /32 for native IPv6 as they do for the 6rd routing and a separate minimum size of a /32 is required while a larger subnet like a /28 may be needed based on a non-contiguous IPv4 addressing plan.

The 6rd prefix is an RIR delegated IPv6 prefix. It must encapsulate an IPv4 address and must be short enough so that a /56 or /60 can be given to subscribers. This example shows how the 6rd prefix is created based on a /32 IPv6 prefix using RFC1918 address space from 10.0.0.0/8:

SP IPv6 prefix: 2001:0DB8::/32 v4suffix-length: 24 (from 10/8, first octet (10) is excluded from the encoding) 6rd CE router IPv4 address: 10.100.100.1 6rd site IPv6 prefix: 2001:0DB8:6464:0100::/56

This example shows how the 6rd prefix is created based on a /28 IPv6 prefix using one of several non-contiguous global address ranges:

SP IPv6 prefix: 2001:0DB0::/28 v4suffix-length: 32 (unable to exclude common bits due to non-contiguous IPv4 allocations) 6rd CE router IPv4 address: 192.0.2.1 6rd site IPv6 prefix: 2001:0DBC:0000:2010::/60

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- *The policy text provides no concrete criteria for ARIN staff to determine when an organization does, or does not, qualify for a subsequent IPv6 allocation.*

- *Additionally, there are no criteria to be used to determine the size of the allocation an organization qualifies for. For example, if an organization says they need 32 bits for encapsulating the IPv4 address, and wants to give a /48 to each customer, they would need a /16 of IPv6 space. Current IPv6 policy provides clear criteria for judging the subsequent allocation size by applying an hd ratio of .94, a criterion which can be applied consistently across the board. This policy would have staff determining subsequent allocation based on "some technical documentation" without any real guidelines. Should staff be approving any request for subsequent IPv6 allocations of any size whenever the justification is "we're using it for a transitional technology"?*

ARIN General Counsel
No comments at this time. It is unlikely to raise legal issues.

Resource Impact: *Minimal*

Draft Policy 2010-13: Permitted Uses of space reserved under NRPM 4.10

https://www.arin.net/policy/proposals/2010_13.html

Owen DeLong has control of this draft policy through ARIN XXVI.
Advisory Council Shepherds: **Scott Leibrand and Bill Sandiford**

23 September 2010

Summary:

Changes the policy: "Dedicated IPv4 Block to Facilitate IPv6 Deployment"

- *Sets aside in its entirety the last /8 ARIN for networks transitioning to a dual IPv4/IPv6 (vs. the current /10)*

- *Any IPv4 address space returned to ARIN (and not subject to a global or regional transfer policy) will be added to this transition pool.*

- *Establishes four classes of requestors, with four different pools to draw from.*

Policy Statement:

[Remove section 4.1.8 (Unmet requests) from the NRPM.]

[Replace the text of section 4.10 in its entirety (including the name) with:]

4.10 IPv4 Transition Pool Post IANA Regular Pool Depletion

When ARIN receives its /8 IPv4 allocation from IANA under the global policy titled "Global Policy for the Allocation of the Remaining IPv4 Address Space" ratified by ICANN Board on 6 March, 2009, that /8 will form a dedicated pool to facilitate IPv6 Deployment.

Addresses returned to ARIN and not subject to a regional or global transfer policy will be reserved for utilization in the transition pool.

Allocations and assignments from this block must be justified by IPv6 transition requirements.

ARIN will use their discretion in determining whether a particular application meets the spirit of this policy.

4.10.1 Addressing Plan

Any organization wishing to receive IPv4 addresses through this policy must submit a detailed addressing plan for any request that is made containing the following:

(a) Their addressing needs over the entire reservation

period and

(b) Methods of meeting all requirements (requirements are explained in section 4.10.4.) over the entire reservation period.

4.10.2 Reservation System

Initially, all space assigned or allocated under this policy will be reserved in advance for a maximum period of 24 months, requests for shorter reservations will be accepted. The total reservation size will be rounded up to a CIDR bit boundary.

Each organization's reservation amount will be divided into quarterly allotments. Allotments will be rounded up to a CIDR bit boundary. The final quarterly allotment will contain only the remaining space from the full reservation. An organization may request one reservation under each provision listed in section 4.10.4. Once a reservation has been satisfied, another may be requested.

4.10.2.1 Reservation Requests Prior to Initial ARIN Free Pool Depletion

Reservations will be accepted from the time that this policy is adopted until the day that ARIN can no longer fill regular requests from space allocated to ARIN by IANA. At that time, if necessary, all reservations will be reduced by an equal amount to allow them to fit within the total space available in the transition pool. No reservation will be reduced lower than the minimum quarterly allotment for it's category. Each organization may decide whether to adjust the reservation period or the allotment size (within the stated range) when reservations are reduced. Organizations must make this decision within 30 days of announcement and may not alter their choice once made. Any space added to the transition pool during this time will cause a final recalculation of reservation sizes. Once all necessary adjustments are made, all reservations are guaranteed and the first quarterly allotment is issued to each org. 4.10.2.2 Reservation Requests Post ARIN Free Pool Depletion

Reservation requests received after ARIN free pool depletion as defined in 4.10.2.1 will not be guaranteed. If approved, such requests will be placed in a queue. As space becomes available in the transition pool it will be used to provide allotments to organizations with reservations in the queue on a first-approved first-served basis. Partially filled allotments will remain at the front of the queue.

4.10.2.3 Abandonment of Reservation

Any organization may abandon their remaining reservation at any time by informing ARIN of their desire to do so. Upon abandonment, the remaining space in the reservation will be returned to the transition pool.

4.10.3 Quarterly Requirements

Organizations with approved reservations and address plans are entitled to quarterly allotments. In order to receive each additional allotment, an organization must submit evidence of compliance with the following sub-sections:

(a) The most recent 4.10 allotment is at least 80% utilized.

(b) All prior 4.10 allotments within the same 4.10.4 category are at least 90% utilized.

(c) All utilization is permitted under the 4.10.4 category for which it was initially requested.

For purposes of this computation, space received under each

provision shall be considered separately if an organization has received resources through multiple provisions.

If an organization does not meet all obligations in any given quarter, that organization shall not receive that quarter's allotment and shall have their reservation reduced by one quarterly allotment. If an organization does not meet all obligations for three consecutive quarters, that organization forfeits the remainder of their reserved block.

Utilization requirements (a) may be delayed at ARIN's discretion.

If an organization is using space received under 4.10 in a manner contrary to 4.10, that organization forfeits their remaining reservation and may have their entire allocation or assignment revoked. All 4.10. space forfeited, revoked or otherwise reclaimed shall be returned to the ARIN transition pool.

4.10.4 Specific types of transitional uses have specific requirements:

(a) An ISP/LIR may request a block no smaller than a /25 nor larger than a /18 per quarter to be used to provide single IPv4 /32s to their customers which could justify a /28 or more of IPv4 under ARIN policies in effect at the time of IANA depletion.

1. No customer site may receive more than a single IPv4 /32 per 1,000 Internet connected hosts up to 8 /32s.

2. The customer site must not have any IPv4 addresses not issued under this policy.

3. The customer site must use the /32 to provide IPv4 connectivity for hosts which have IPv6 addresses with IPv6 connectivity to the ISP/LIR.

4. The ISP/LIR must demonstrate that it already provides IPv6 addressing and connectivity to at least one additional existing customer site for each /32 requested, up to 90% of all customer sites served (across all customers).

5. An ISP/LIR customer which is not large enough to qualify under this provision and has no unassigned IPv4 addresses may receive an appropriate number of /32s from their upstream provider for reassignment to their customers under the terms of 4.10.4(a).

6. A customer site which terminates multiple connections from the same provider on separate routers may qualify for one /32 per unique router with a direct connection to the provider, up to a total of 8 /32s.

7. The total space issued to all organizations under this provision shall not exceed an aggregate /9 or equivalent per /8 placed into the transition pool.

(b) An ISP/LIR or End user organization may request a block no smaller than a /28 and no larger than a /18 per quarter to provide single IPv4 /32s to each physical server used to provide Internet reachable content.

1. Space issued under this provision is an assignment, not an allocation. An LIR may not distribute this space to their customers.

2. No server may receive more than a single IPv4 /32 under this provision.

3. The server must have IPv6 addresses with IPv6 connectivity (must be dual-stacked).

4. The receiving organization must demonstrate that it already provides IPv6 addressing and connectivity to at least one additional existing server (organizations which can show 100% dual stack are exempt from this requirement).

5. The receiving organization must IPv6 enable all of their content on the following schedule:

   + 25% of content IPv6 reachable within six months of receiving their first addresses under this policy

   + 50% of content IPv6 reachable within one year of receiving their first addresses under this policy

   + 75% of content IPv6 reachable within 18 months of receiving their first addresses under this policy

   + 90% of content IPv6 reachable within 24 months of receiving their first addresses under this policy

6. A network providing SSL terminations for applications or content acceleration may receive a /32 for each distinguished name by following all requirements in this provision, substituting "distinguished name" for "server."

7. Networks using these addresses for authoritative DNS servers can use 2 /32s per 1,000 authoritative domains served up to 128 /32s total per organization.

8. The total space issued to all organizations under this provision shall not exceed an aggregate /9 or equivalent per /8 placed into the transition pool.

(c) An ISP/LIR or End user organization may request a block nosmaller than a /29 and no larger than a /25 per quarter for purposes relevant to their ability to deploy IPv6.

1. Space issued under this provision is an assignment, not an allocation. An LIR may not distribute this space to their customers.

2. Space issued under this provision must be used to provide the required public IPv4 address(es) for transitional technologies operated by the recipient organization.

   Specific examples of permitted uses are:

   a. Large scale or "Carrier Grade" NAT

   b. NAT-PT

   c. DS-LITE/B4/AFTER

   d. IVI

   e. DNS64 or other transitional DNS enablers

   f. Other technologies of similar purpose and scope.

3. A /10 from the final /8 shall be reserved for issuance under this provision. In no case shall any addresses from this /10 be issued for any purpose outside of 4.10.4(c).
   (d) Applications which would qualify for IPv4 under section 4.4 of the NRPM (critical infrastructure) may qualify for IPv4 space under this policy if they meet the following criteria:

1. The critical infrastructure to be numbered must also have IPv6 addresses and must provide all services provided on IPv4 over IPv6 on the same time table.

2. Assignments under this provision shall be the smallest technically feasible size for the critical infrastructure in question.

3. The total space assigned under this provision shall not exceed the equivalent of a /14.

Rationale:

The current terminology in section 4.10 is vague and could allow a variety of interpretations which could lead to allocations or assignments being made to ISPs intending to misuse the space for general deployment by using IPv6 overlay technologies as a "IPv6 deployments" requiring IPv4 space for transition. For example, the current policy could be interpreted to enable an ISP to require IPv4 addresses for all IPv6 customers to roll IPv6 out as 6rd to customers who would be otherwise unable to get IPv4 space. This is clearly outside of the original intent of the proposal which created 4.10 (6rd was not yet envisioned at the time that was written). This proposal seeks to clarify that intent and tighten up the requirements for organizations seeking to get space from this limited final resource so that it truly is available to facilitate transitional technologies.

Additionally, there are a number of community segments that are not well served by the original intent of 4.10 and several community members requested a mechanism for providing a certain amount of certainty with regards to obtaining space at the end. While it would be impossible to guarantee organizations all the space they need as runout is upon us, this policy seeks to provide a way for organizations to sign up for and receive a reservation from the final space proportionate to their need. The policy also includes guidelines intended to ensure that this vital community resource is given only to organizations working towards a smooth transition to IPv6 to the benefit of the full community.

In order to meet these needs, this policy has become very complex. It is an unfortunate artifact of the complex issue it seeks to address. A great deal of effort has been made to simplify the policy as much as possible, and, special thinks go out to several members of the community for their assistance in this matter.

One provision in this draft policy calls for utilization criteria which may be waived by ARIN staff discretion. The intent of this clause is to allow staff to avoid penalizing an organization for successful address conservation efforts.

Runout is upon us. IANA will run out of the IANA free pool and issue the last /8 this policy seeks to regulate before the next ARIN public policy meeting. If we are to make any attempt at fair distribution for the sake of IPv6 deployment, this is our final opportunity to do so outside of an emergency action by the ARIN board.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- The policy text has become very complex and complicated and the general community will have a very hard time understanding the concepts and criteria proposed within the policy.

- It seems to be out of order - it starts out with reservations before ever mentioning the initial qualifying criteria. The author might want to consider re-ordering to start with the essential qualification criteria first.

- Section 4.10.2 suggests that all allocations made under this policy will initially be made from a 3-year reservation. In light of the imminent depletion of IPv4 address space, it doesn't seem fair to allow some organizations to retain/reserve this valuable resource for up to 3 years while others will be denied.

- The policy text in (in 4.10.3) appears to contradict itself, as it first directs staff to remove one quarter's worth of reservation, and then, if the organization continues this practice for three consecutive quarters, remove the organization's reserves completely. Later, it explicitly directs staff to revoke addresses issued under this policy that are used by the organizations for purposes not permitted under this policy.

- This proposal will essentially supplant the recently ratified policy "Waiting List for Unmet Resources". That list will consist of people waiting for resources to be returned or revoked so that ARIN can then reissue them to requestors in need of IPv4 address space. This proposal says that any IPv4 address space that comes back to ARIN immediately goes into the IPv6 transition pool and can only be used for that purpose.

- Under 4.10.4.B5, how would staff be able to verify that x percent of an organization's content is IPv6 reachable?

ARIN General Counsel
This policy is unlikely to cause any legal issues of any importance.

Resource Impact: *Major*
This policy would have moderate to major resource impact. It is estimated that implementation would occur within 6 to 9 months after ratification by the ARIN Board of Trustees. The following would be needed in order to implement:

- *Changes to the way ARIN manages reverse DNS (to handle in-addr.arpa delegations for blocks smaller than /24)*

- *Updated guidelines*

- *Staff training*

Draft Policy 2010-14: Standardize IP Reassignment Registration Requirements

https://www.arin.net/policy/proposals/2010_14.html

Chris Grundemann has control of this draft policy through ARIN XXVI.

Advisory Council Shepherds: **Marla Azinger and Cathy Aronson**

10 August 2010

Summary:

- *Tightens the requirements for SWIP or RWHOIS registration information*
- *Replaces the existing Cable Address Policy with a broader policy applicable to all residential dynamic addressing pools*
- *Extends its application to IPv6*
- *Better defines what a residential customer is*
- *Changes reassignment policy so that /64s and larger networks must be registered via SWIP or RWhois*
- *Adds a criterion for staff to initiate a NRPM 12 resource review audit.*

Policy Statement:

[Add:]

2.3. Organizational Information

When required, organization Information must include at a minimum: Legal name, street address, city, state, zip code equivalent and at least one valid technical and one valid abuse POC. Each POC shall be designated by the organization and must include at least a verifiable email address and phone number.

2.12. Residential Customer

End-users who are individual persons and not organizations and who receive service at a place of residence for personal use only are considered residential customers.

[Rename 4.2.3.7. "Reassignment information" to "Registration" and add text:]

ISPs are required to demonstrate efficient use of IP address space allocations by providing appropriate documentation, including but not limited to assignment histories, showing their efficient use.

[Rename 4.2.3.7.1. "Customer organization information" to]

"Reassignment Information" and replace text with:

Each IPv4 assignment containing a /29 or more addresses shall be registered in the WHOIS directory via SWIP or a distributed service which meets the standards set forth in section 3.2. Reassignment registrations shall include each client's organizational information, except where specifically exempted by this policy.

[Strike sections 4.2.3.7.2., 4.2.3.7.4. and 4.2.3.7.5.]

[Renumber section 4.2.3.7.3. to 4.2.3.7.2., rename to "Assignments visible within 7 days" and replace text with:]

All assignments shall be made visible as required in section 4.2.3.7.1 within seven calendar days of assignment.

[Renumber and replace 4.2.3.7.6. Residential Customer Privacy with:]

4.2.3.7.3. Residential Subscribers

4.2.3.7.3.1. Residential Market Area

ISPs that assign address space to the infrastructure to which their customers connect rather than to individual subscribers must register assignment information regarding each market area holding such an address block. Market area reassignments shall be registered with the network name used to identify each market area. Any assignment to specific end-users holding /29 and larger blocks still requires registration. A >50% utilization rate shall be considered efficient for market area reassignments from the ISPs most recent allocation.

4.2.3.7.3.2. Residential Customer Privacy

To maintain the privacy of their residential customers, an organization with downstream residential customers holding /29 and larger blocks may substitute that organization's name for the customer's name, e.g. 'Private Customer - XYZ Network', and the customer's street address may read 'Private Residence'. Each private downstream residential reassignment must have accurate upstream Abuse and Technical POCs visible on the WHOIS directory record for that block.

[Strike section 4.2.6. "Cable Address Space Policy"]

[Replace Section 6.5.5. with:]

6.5.5. Registration

ISPs are required to demonstrate efficient use of IP address space allocations by providing appropriate documentation, including but not limited to assignment histories, showing their efficient use.

6.5.5.1. Reassignment information

Each IPv6 assignment containing a /64 or more addresses shall be registered in the WHOIS directory via SWIP or a distributed service which meets the standards set forth in section 3.2. Reassignment registrations shall include each client's organizational information, except where specifically exempted by this policy.

6.5.5.2. Assignments visible within 7 days

All assignments shall be made visible as required in section 4.2.3.7.1 within seven calendar days of assignment.

6.5.5.3. Residential Subscribers

6.5.5.3.1. Residential Market Area

ISPs that assign address space to the infrastructure to which their customers connect rather than to individual subscribers must register assignment information regarding each market area holding such an address block. Market area reassignments shall be registered with the network name used to identify each market area. Any assignment to specific end-users holding /64 and larger blocks still requires registration. A >50% utilization rate shall be considered efficient for market area reassignments from the ISPs most recent allocation.

6.5.5.3.2. Residential Customer Privacy

To maintain the privacy of their residential customers, an organization with downstream residential customers holding /64 and larger blocks may substitute that organization's name for the customer's name, e.g. 'Private Customer - XYZ Network', and the customer's street address may read 'Private Residence'. Each private downstream residential reassignment must have accurate upstream Abuse and Technical POCs visible on the WHOIS record for that block.

Rationale:

After many conversations both at and following the last public policy meeting in Toronto, some revisions have been made. These all address specific concerns raised by multiple interested parties:

1) Organizational Information – Phone number, street address and abuse POC now required.

2) Residential Customer – Added "for personal use only" to the definition.

3) Registration (4.2.3.7 & 6.5.5) – Added "but not limited to" WRT assignment histories.

4) IPv6 – Requires all /64 and larger blocks to be registered.

5) Resource Review – Added this section.

Timetable for implementation: Immediate

STAFF ASSESSMENT

ARIN Staff Comments

- This proposal would replace the 3 existing qualifying criteria of the Cable Policy (NRPM section 4) with the single criterion of must show >50% utilization.

  - It is staff's observation that the existing cable policy works well for cable providers as is and staff cannot discern what problem this section of the proposal is attempting to solve.

  - The current cable policy requires 80% of the ISP's address space to be provisioned to hardware and to be reassigned, with a 50 – 80% utilization rate. This new proposal removes the 80% requirement, which would

allow a provider to provision and reassign only 50% of their most recent allocation. The result seems to be lowered efficiency of overall address space usage.

  - The text in this section is somewhat unclear and confusing as written.

- Because this proposal would apply to all residential dynamic addressing pools (in addition to cable), it would likely be beneficial for many of ARIN's customers who share very similar technologies to the cable industry, but have never been able to apply under the cable policy (technologies like dsl, fiber to the home, etc.).

- This proposal provides a well-defined explanation of what a residential customer is and will be beneficial to both the community and to the staff. The existing definition of "residential customer" has caused some confusion for customers.

ARIN General Counsel

Currently, counsel is reviewing US and Canadian law regarding the policy's suggested changes to the balance in current ARIN policy on customer 'privacy' and business proprietary information related to residential customers. At this point there is no significant legal issue. We will update this as soon as possible.

Resource Impact:

This policy would have moderate to major resource impact. It is estimated that implementation would occur within 6 months to 9 months after ratification by the ARIN Board of Trustees. The following would be needed in order to implement:

- Potential Database impact if all /64s and larger assignments must now be swipped (there are ~4 billion /64s in a /32 so the scale of this goes beyond anything ARIN has seen).

- Changes to current business processes

- Updated templates

- Updated guidelines

- Staff training

# Appendix A: PROCESS FLOW CHART

1 **Proposal**

Submittal
- By anyone at anytime (not Staff or BoT)
- Submit template to policy at ARIN
- Staff posts the proposal to PPML and forwards it to the AC.
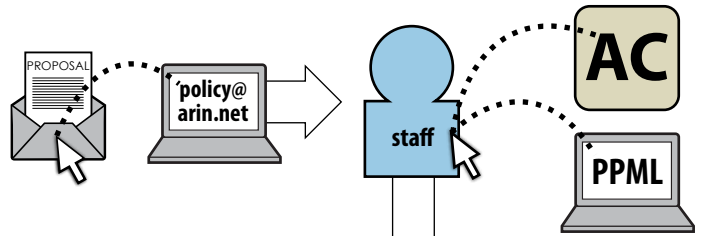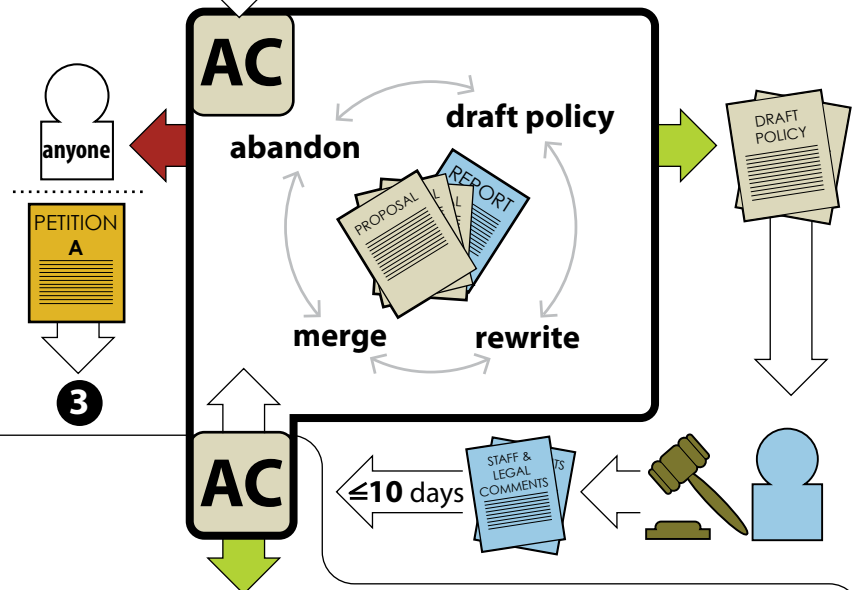
2 **Draft Policy**

a. **Clarity & Understanding**
- Staff and originator work together to ensure clarity and understanding of what is being proposed.
- Staff does not evaluate the proposal.
- Staff reports the result of this step to the AC within 10 days.
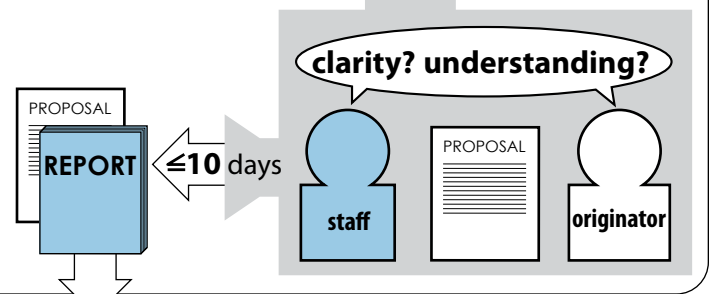
b. **Development & Evaluation**
- AC assumes control of all proposals.
- AC develops and evaluates proposals to only bring forth technically sound policies that make a positive contribution to the Number Resource Policy Manual. The AC may rewrite, merge, abandon, etc.; for example, they may use a proposal as an idea to generate a draft policy.
- AC must submit for Staff and Legal review if it intends to move a draft policy forward. Review comments must be understood and addressed. Text may be revised in response.
- AC must make a decision regarding any proposal within 30 days of receipt (approx.).
- Decisions posted to PPML.

c. **Discussion & Review**
- AC selects sound and useful draft policies for community discussion.
- Relevant staff and legal comments are published with each draft policy.
- Anyone may initiate Discussion Petition (Petition A*) if dissatisfied with AC action.
- Staff and legal reviews are conducted for successful petitions.
- Draft policy is posted to PPML for community discussion and review.

3 **Public Policy Meeting**
- The PPM agenda will contain those draft policies that will have been on the PPML for at least 35 days prior to the meeting.

Draft policy text is frozen 10 days prior to PPM so that a single text for each draft policy is considered at the meeting.

- The AC presents draft policies at the Public Policy Meeting; the successful petitioner presents their draft policy. Competing proposals will be discussed together.
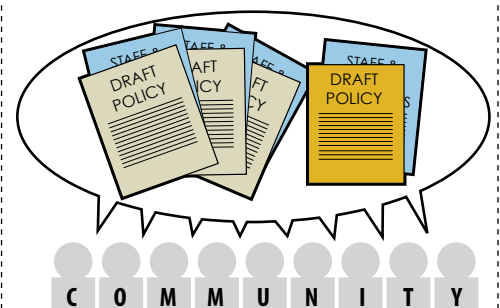
❸ Public Policy Meeting (cont.)

Discussion and votes at the meeting are for the consideration of the AC.

❹ Consensus

a. Discussion Evaluation
- AC controls all draft policies.
- AC considers list and meeting discussion and may rewrite, merge, abandon, send to last call, etc.
- Draft policies not abandoned or sent to last call are placed on AC's docket for further development and evaluation.
- AC's decisions are posted to PPML.
- Anyone may initiate Last Call Petition (Petition B*) if dissatisfied with AC action.
- AC must make a decision within 30 days of the PPM.

anyone

PETITION B

abandon **rewrite**

DRAFT POLICY

last call **merge**

b. Last Call

AC selects draft policies that have support both in the community and the AC and sends them to a last call for comments on the PPML for at least 10 days. If text is different from the frozen version, AC will explain.

LAST CALL

COMMUNITY

AC

anyone

PETITION C

❺

c. Last Call Review
- AC determines consensus for each draft policy.
  - Reviews last call comments
  - Revisits earlier decision
  - Determines readiness for consideration by BoT
- AC may revise and repost to last call.
- AC's decisions are posted to PPML.
- Anyone may initiate BoT Consideration Petition (Petition C*) if dissatisfied with AC action.
- AC determines consensus within 30 days of the end of Last Call.

AC forwards...

DRAFT POLICY **DRAFT POLICY**

❺ Board of Trustees Review

Within 30 days of receipt the Board examines each draft policy in terms of fiduciary risk, liability risk, conformity to law, development in accordance with the ARIN PDP, and adherence to the ARIN Articles of Incorporation and bylaws. The Board may adopt, reject or remand draft policies to the AC. Rejections will include an explanation. Remands will include an explanation and a recommendation. The Board may also seek clarification from the AC without remanding the draft policy. The results of the Board's decision are announced to the community via PPML.

DRAFT POLICY

BoT

**ADOPTED POLICY**

❻ Implementation

The expected implementation date of the policy is announced at the time that adoption of the policy is announced. ARIN staff updates to include the adopted policy into the Number Resource Policy Manual and implements and publishes a new version of the manual.

["IMPLEMENTATION DATE"]

staff

ADOPTED POLICY

NUMBER RESOURCE POLICY MANUAL
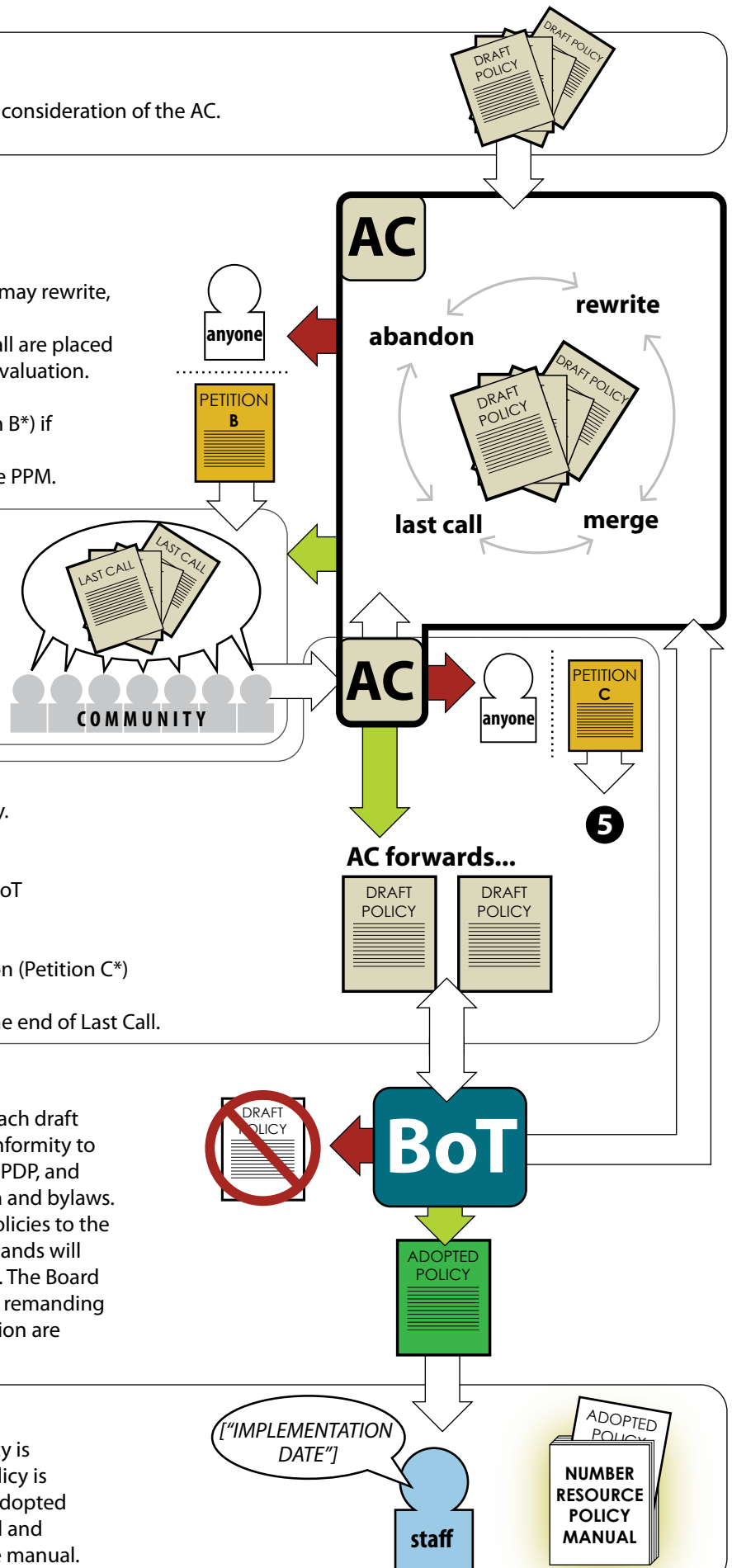
# Appendix A: PDP PETITIONS
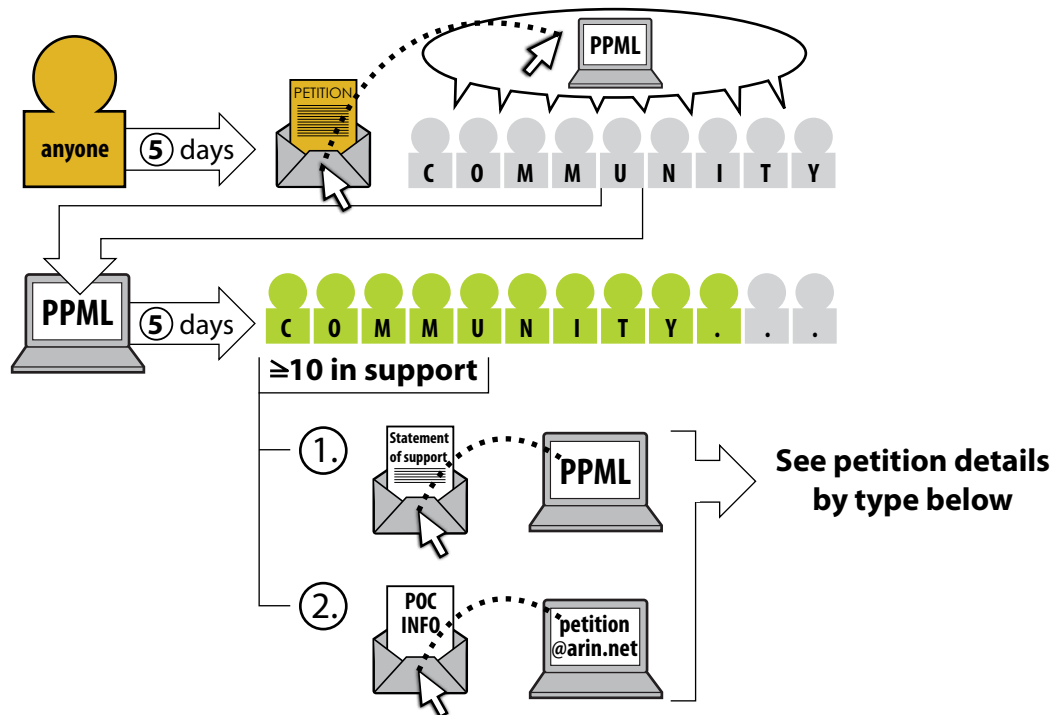
Discussion Petition - If any member of the community, including a proposal originator, is dissatisfied with the AC action on a policy proposal they can initiate a Discussion Petition to move this particular proposal to the PPML for discussion as a draft policy. Anyone may initiate the petition on the PPML (within 5 business days of publication of the AC's decision); the petition must include the proposal and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds. Success is support from at least 10 different people from 10 different organizations.
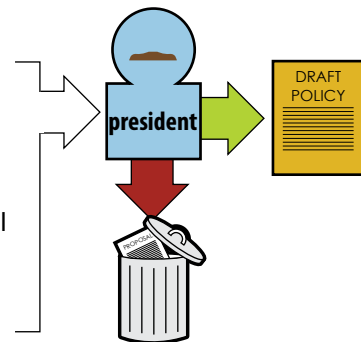
Last Call Petition - If any member of the community, including a proposal originator, is dissatisfied with the AC action on a draft policy they can initiate a Last Call Petition to move this particular draft policy to the PPML for last call. Anyone may initiate the petition on the PPML (within 5 business days of the publication of the AC's decision); the petition must include the draft policy and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds. Success is support from at least 10 different people from 10 different organizations.
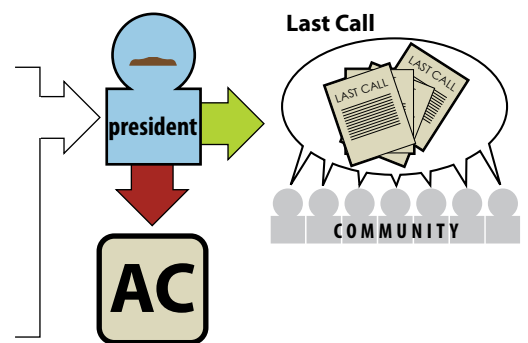
BoT Consideration Petition - If any member of the community is dissatisfied with the AC action on a draft policy they can initiate a Board of Trustees Consideration Petition to move this particular draft policy for consideration by the Board of Trustees. Anyone may initiate the petition on the PPML (within 5 business days of the publication of the AC's decision); the petition must include the draft policy and a petition statement. The petition duration is 5 business days. The ARIN President determines if the petition succeeds. Success is support from at least 10 different people from 10 different organizations.
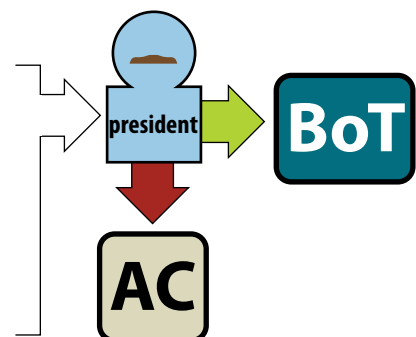
Appendix A: SPECIAL BoT POLICY ACTIONS

Emergency PDP

The Board of Trustees may initiate the Emergency PDP by declaring an emergency and posting a draft policy to the PPML for discussion (minimum 10 business days). The AC will review the draft policy within 5 business days of the end of the discussion period and make a recommendation to the BoT. If the BoT adopts the policy, it will be presented at the next PPM for reconsideration.
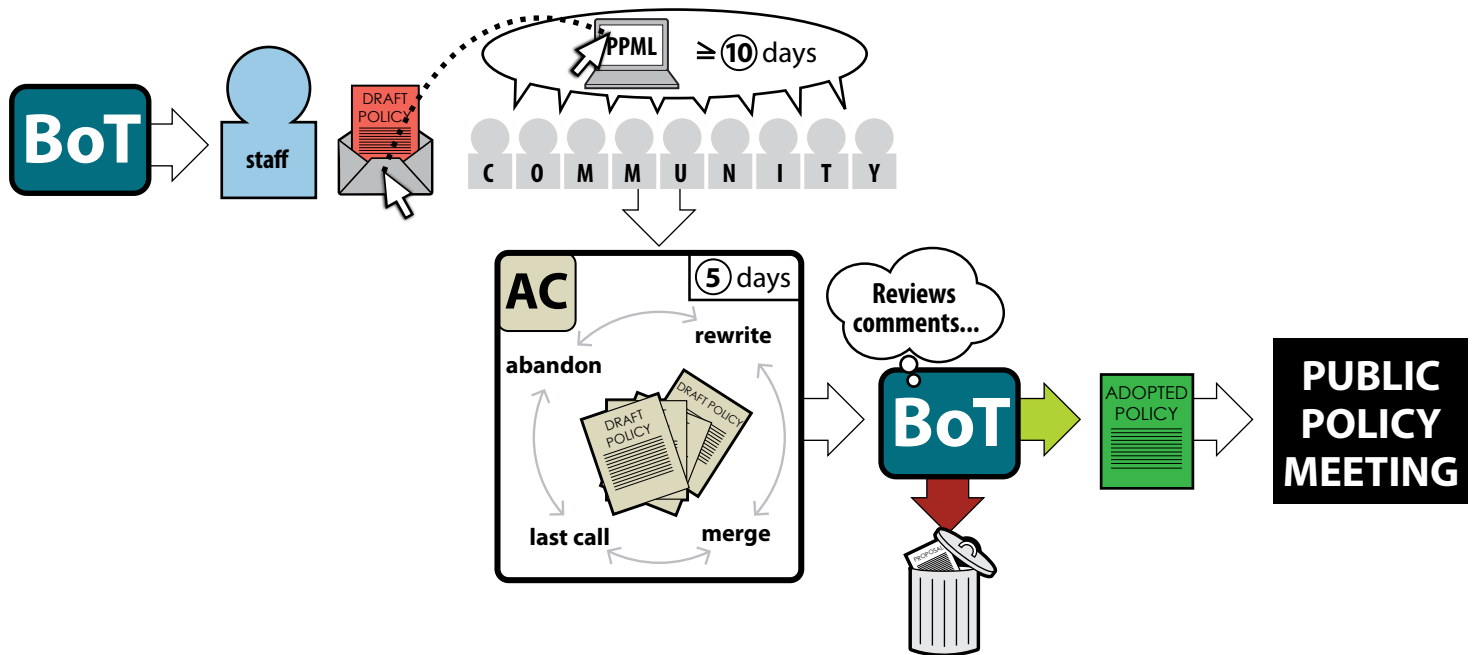
Policy Suspension

If, after a policy has been adopted, the BoT receives credible information that a policy is flawed in such a way that it may cause significant problems if it is continued to be followed, the BoT may suspend the policy and request a recommendation from the AC on how to proceed. The AC's recommendation will be posted for discussion on the PPML for a period of at least 10 business days. The BoT will review the AC's recommendation and the list discussion. If suspended, the policy will be presented at the next scheduled PPM in accordance with the procedures outlined in this document.
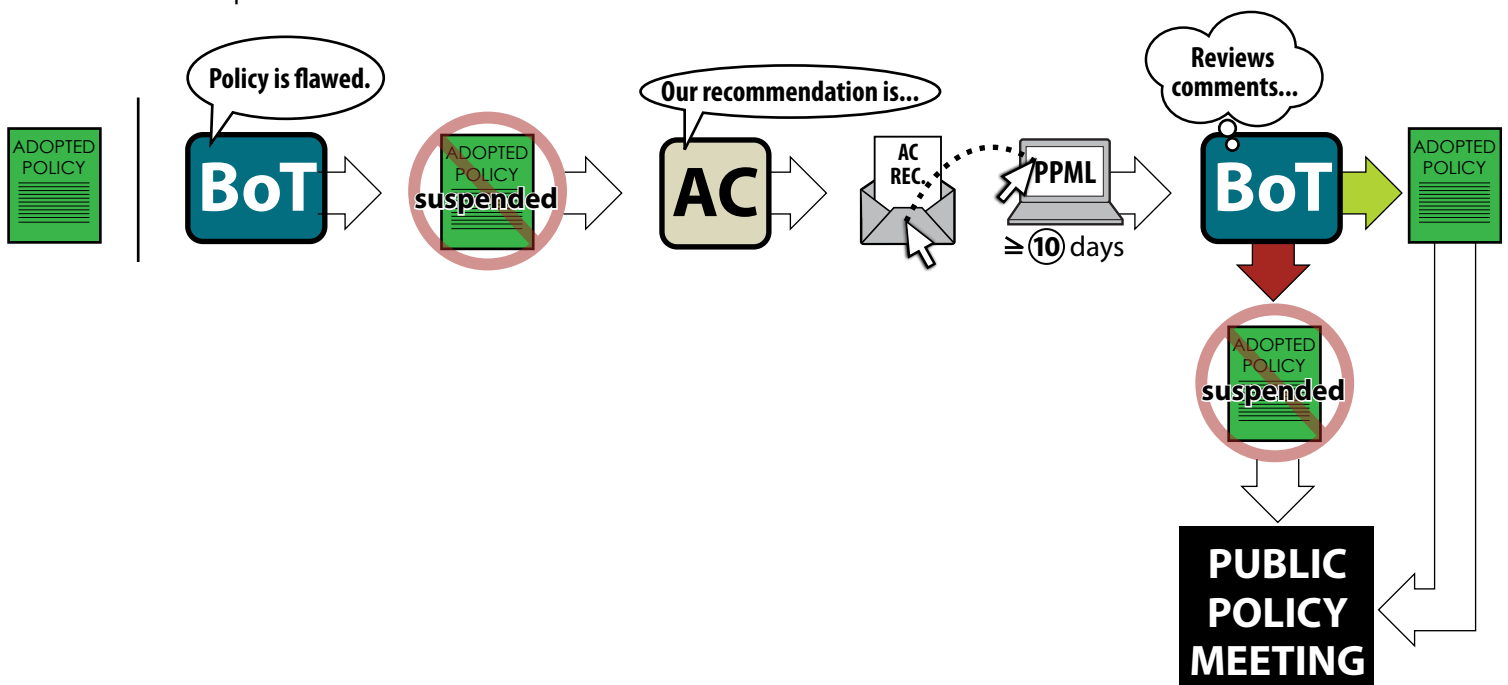
Appendix B: PROPOSAL TEMPLATE

Guidelines for Completing the ARIN Policy Proposal Template are available at: **https://www.arin.net/policy/pdp_appendix_b.html**.

Template: ARIN-POLICY-PROPOSAL-TEMPLATE-2.0

1. Policy Proposal Name:

2. Proposal Originator

    1. name:

    2. email:

    3. telephone:

    4. organization:

3. Proposal Version:

4. Date:

5. Proposal type:

    new, modify, or delete.

6. Policy term:

    temporary, permanent, or renewable.

7. Policy statement:

8. Rationale:

9. Timetable for implementation:

END OF TEMPLATE

ARIN
American Registry for Internet Numbers